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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/573,180

03/23/2006

Tomiji Tanaka

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EXAMINER

NGUYEN, PHILLIP

ART UNIT

PAPER NUMBER

2828

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/573,180	Applicant(s) TANAKA, TOMIJI	
	Examiner PHILLIP NGUYEN	Art Unit 2828	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>3/23/06 & 10/4/06</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Specification

1. The abstract of the disclosure is objected to because reference “5” is denoted as both a grating and a first support member. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3, 9, 11, 13, and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Kimura et al. (US 20020118715).

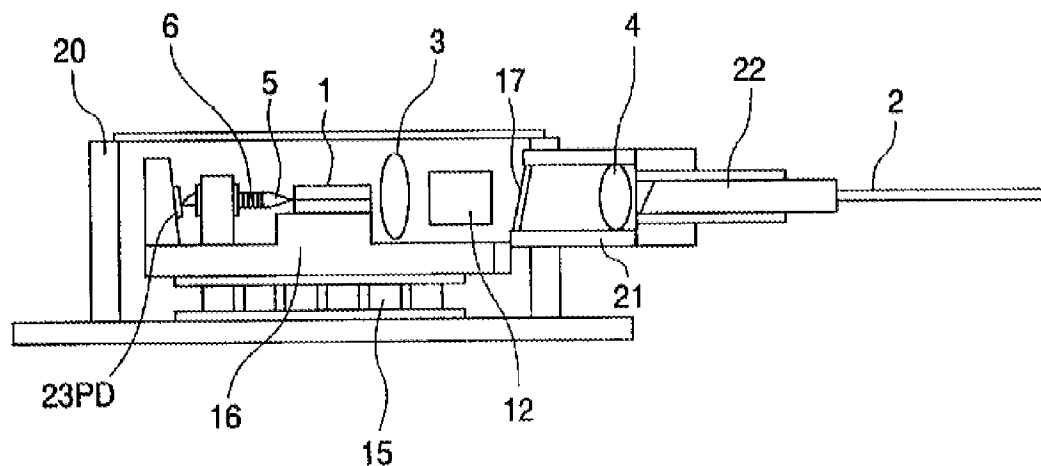


FIG. 1

With respect to claims 1 and 11, Kimura discloses in Fig. 1a laser system, comprising: a base plate/surface plate 20; a heat sink (bottom plate of the enclosure); that is connected to the base plate and that is nearly perpendicular thereto; a heat generation device or a heat absorption device 15 that is connected to the heat sink and that is nearly perpendicular to the base plate; and a laser section that is connected to the heat generation device or the heat absorption device and that is nearly perpendicular to the base plate, one surface of the heat generation device or the heat absorption device being connected to the laser section, the other surface of the heat generation device or the heat absorption device being connected to the heat sink, wherein the laser section has a semiconductor laser device 1, a lens 5, a grating 6, and a support member 16, the semiconductor laser device, the lens, and the grating composing an external cavity type semiconductor laser, the support member supporting the external cavity type semiconductor laser, wherein the laser section is connected to the heat generation device or the heat absorption

device connected to the heat sink by the support member, and wherein the external cavity type semiconductor laser is covered by the support member and a lid 17 that has heat resistance.

With respect to claims 3 and 13, Kimura discloses a space between the laser section and the base plate with a predetermined height (see the Fig. 1).

With respect to claims 9 and 19, Kimura discloses the heat absorption or generation device being a Peltier device (paragraph 0053).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 4-8, 10, 12, 14-18 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kimura et al. (US 20020118715).

With respect to claims 2 and 12, Kimura discloses the claimed invention except for an insulation connected between the base plate and the heat-sink. It would have been obvious to one skill in the art at the time the invention was made to provide an insulation between these components in order to reduce the heat transfer from/to other components so that controlling the temperature of the laser is more efficient.

With respect to claims 4, 7, 14 and 17, Kimura discloses the claimed invention except for explicitly teaching the specific distance between the base plate and the laser section; however, it would have been obvious to the one having ordinary skill in the art at the time the invention was made to provide a distance of at least 10 mm between the laser section and the base plate because the distance between the grating support and the base plate is obviously larger than 10 mm.

With respect to claims 5-6, 8, 15-16, and 18, there is air between the base plate and the photodiode holder. Air is considered as a good heat insulation member. Therefore the laser system include a space between the base plate and the laser section, because the photodiode holder is located between the base plate and the laser section.

With respect to claims 10 and 20, Kimura discloses the claimed invention except for a temperature detection means for detecting the temperature of the laser section. However, Kimura discloses in Fig. 6 a thermistor S which is used to detecting the laser section. It would have been obvious to the one having ordinary skill in the art at the time the invention was made to provide a thermistor as a temperature detection means in order to provide feedback of the temperature of the laser section so that the Peltier device could be adjusted to a desired temperature.

Communication Information

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phillip Nguyen whose telephone number is 571-272-1947. The examiner can normally be reached on 9:00 AM - 6:00 PM, Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, MINSUN HARVEY, can be reached on 571-272-1835. The fax phone number for the organization where this application or proceeding is assigned is **571-273-8300**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Phillip Nguyen/

AU 2828

/Minsun Harvey/
Supervisory Patent Examiner, Art Unit 2828